

Title (en)

ORGANIC SOLAR CELL AND MANUFACTURING METHOD THEREFOR

Title (de)

ORGANISCHE SOLARZELLE UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)

CELLULE SOLAIRE ORGANIQUE ET PROCÉDÉ DE FABRICATION ASSOCIÉ

Publication

**EP 3139420 A4 20171213 (EN)**

Application

**EP 15785539 A 20150430**

Priority

- KR 20140052648 A 20140430
- KR 2015004404 W 20150430

Abstract (en)

[origin: EP3139420A1] The present specification relates to an organic solar cell and a method for manufacturing the same.

IPC 8 full level

**H01L 51/46** (2006.01); **C09K 11/06** (2006.01); **H01L 51/42** (2006.01)

CPC (source: EP US)

**C07D 323/00** (2013.01 - EP US); **C09K 11/06** (2013.01 - EP US); **H10K 30/00** (2023.02 - US); **H10K 30/211** (2023.02 - EP);  
**H10K 30/30** (2023.02 - EP); **H10K 85/113** (2023.02 - US); **H10K 85/1135** (2023.02 - US); **H10K 85/215** (2023.02 - US);  
**H10K 30/211** (2023.02 - US); **H10K 30/30** (2023.02 - US); **H10K 30/50** (2023.02 - EP); **Y02E 10/549** (2013.01 - EP); **Y02P 70/50** (2015.11 - EP)

Citation (search report)

- [E] EP 2975663 A1 20160120 - LG CHEMICAL LTD [KR] & WO 2014181986 A1 20141113 - LG CHEMICAL LTD [KR]
- [E] CN 104779351 B 20170825
- [A] JAE WOONG JUNG ET AL: "Enhanced Performance and Air Stability of Polymer Solar Cells by Formation of a Self-Assembled Buffer Layer from Fullerene-End-Capped Poly(ethylene glycol)", ADVANCED MATERIALS, vol. 23, no. 15, 1 March 2011 (2011-03-01), pages 1782 - 1787, XP055104867, ISSN: 0935-9648, DOI: 10.1002/adma.201003996
- [A] QIDONG TAI ET AL: "Enhanced photovoltaic performance of polymer solar cells by adding fullerene end-capped polyethylene glycol", JOURNAL OF MATERIALS CHEMISTRY, vol. 21, no. 19, 4 April 2011 (2011-04-04), GB, pages 6848, XP055412676, ISSN: 0959-9428, DOI: 10.1039/c0jm04559d
- [A] SIH-HAO LIAO ET AL: "Multiple Functionalities of Polyfluorene Grafted with Metal Ion-Intercalated Crown Ether as an Electron Transport Layer for Bulk-Heterojunction Polymer Solar Cells: Optical Interference, Hole Blocking, Interfacial Dipole, and Electron Conduction", JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, vol. 134, no. 35, 17 August 2012 (2012-08-17), US, pages 14271 - 14274, XP055412645, ISSN: 0002-7863, DOI: 10.1021/ja303813s
- [XP] XIAODONG LIU ET AL: "Crown-ether functionalized fullerene as a solution-processable cathode buffer layer for high performance perovskite and polymer solar cells", JOURNAL OF MATERIALS CHEMISTRY A: MATERIALS FOR ENERGY AND SUSTAINABILITY, vol. 3, no. 17, 16 March 2015 (2015-03-16), GB, pages 9278 - 9284, XP055412614, ISSN: 2050-7488, DOI: 10.1039/C5TA01277E
- See also references of WO 2015167284A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

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JP 2017516299 A 20170615; JP 6372900 B2 20180815; KR 101666745 B1 20161014; KR 20150125616 A 20151109;  
US 10439142 B2 20191008; US 2017040543 A1 20170209; WO 2015167284 A1 20151105

DOCDB simple family (application)

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KR 20150061548 A 20150430; US 201515303712 A 20150430